

**Notice of Allowability**

Application No.

10/810,878

Applicant(s)

HOU, YANMING

Examiner

David M. Fenstermacher

Art Unit

3682

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed 3/26/04.
2. ☒ The allowed claim(s) is/are 1-24.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 3/26/04, 8/9/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### **REASONS FOR ALLOWANCE**

1. The following is an examiner's statement of reasons for allowance:

None of the prior art of record shows or renders obvious the power take-off control system of claim 1; and the method for engaging and operating variable loads on a power take-off shaft of claims 14, and 23, specifically:

Claim 1 requires said controller be operable to generate a first set of time-based engagement control signals during a time period between commencement of an engagement operation and the time at which an output shaft speed signal indicative of movement by the output shaft is detected by said controller, and a second set of engagement signals at times subsequent to said detection of movement by the output shaft, said controller operable, upon detection of movement of the output shaft, to determine whether the monitored input speed at such time has remained within an established deviation value from the nominal input speed prior to such time and to establish a first load status if the speed has remained within the established deviation value and to establish another load status if the speed has not remained within the established deviation value, said second set of time-based engagement signals including a subset of engagement control signals dependent, in part, upon the established load status and defining a flattened control curve relative to control curves that are established for loads of said another load status.

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Claim 14 requires the steps of:

- (a) monitoring the output shaft speed signals to detect the speeds at given times of the output shaft and initial movement of the Output shaft as a result of application of engagement control signals;
- (b) monitoring the input shaft speed signals to detect the speeds at given times of the input shaft;
- (c) determining, upon detection of initial movement of the output shaft, the deviation of speed of the input shaft and establishing a first load status if the speed deviation has remained within an established deviation value and establishing another load status if the speed has not remained within the established deviation value;
- (d) applying, for said first load status, a set of time-based engagement control signals defining a flattened control relative to control curves that would be applied for loads of said another load status.

Claim 23 requires the steps of:

- (a) monitoring the input and output shaft speed signals to detect the speeds at given times of the input and output shafts;
- (b) periodically checking to determine if output shaft movement has occurred;
- (c) upon detection of initial output shaft movement, checking to determine whether the monitored input speed at such time has remained within an established deviation value from the nominal input speed prior to such time and,
- (i) if the input speed has remained within the established deviation value, establishing a

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first load status and then proceeding to step (d); or

if the input speed has not remained within the established deviation value, establishing another load status and then proceeding to step (d);

(d) applying a set of time-based engagement control signals, dependent in part upon the established load status, to the clutch;

whereby a set of time-based engagement control signals for the first load status define a flattened control curve relative to control curves that would be applied for loads of said another load status.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Information Disclosure Statement***

The IDS's, filed 3/26/04 and 8/9/04, have been considered in full.

#### ***Drawings***

2. The drawings, as originally filed, are acceptable as formal.

#### ***Double Patenting***

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3. There are no double patenting issues with applications 10/811,206 or 10/810,781.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David M. Fenstermacher whose telephone number is 571-272-7102. The examiner can normally be reached on 10:30-7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
DAVID FENSTERMACHER  
PRIMARY EXAMINER

3/30/07